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ABSTRACT

Investigation indicated factors other than human resource variables must be used to understand unemployment status. Based on a 1979 survey of a random sample (N=640) of rural adult California residents from a multi-county development district, 15 human resource development factors (including educational level, job training, match of work skills and work role, job satisfaction, labor union participation, and migration attitudes) were shown to be relatively unimportant in the explanation of length of unemployment and of only marginal use as potential discriminators of employed-unemployed people. The human resource development model, a part of development philosophy since the late 19th century, is based on the contention that investments in human beings will benefit the recipients by making them better able to participate in society. The theory assumes that unemployment is directly related to a lack of work role skills and that skill modification will result in employment. However, if work roles requiring sophisticated skills do not exist in rural areas, then there is little utility in extensive human resource development within such communities (i.e., the trained must leave to find jobs). It is suggested, therefore, that local employment structures should be carefully examined, that emphasis be placed upon economic infrastructure development, and that job training follow job creation. (SB)

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AN ANALYSIS OF RURAL UNEMPLOYMENT USING A HUMAN RESOURCES DEVELOPMENT PERSPECTIVE

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ABSTRACT

Data were collected from 640 adult residents of a multi-county development district in northeast-central California during the summer of 1979. Occupied residences were selected on a systematic random sampling basis and the head-of-household or mate was requested to complete a structured questionnaire designed to generate data about unemployment status and human resources characteristics of the primary wage earner in the household. A human resources development model was formulated and put to test using the unemployment data. The findings demonstrated that the human resources development factors were relatively unimportant in the explanation of length of unemployment. The human resources development variables used in the study were employed as potential discriminators of employed-unemployed people and the findings demonstrated them to be only marginally successful. The findings strongly suggest that factors other than human resources variables must be used to gain insight into unemployment status.

AN ANALYSIS OF RURAL UNEMPLOYMENT USING A HUMAN RESOURCES DEVELOPMENT PERSPECTIVE

INTRODUCTION

Change agents have been concerned for many years with the selection of appropriate strategies for implementing development programs (Cary, 1970; Biddle and Biddle, 1965; Beal, et al, 1971; Blakely, 1979). Many strategies have been conceived and tried. Some of the change models have failed and subsequently have been discarded while others have proved quite useful in practice and have been adopted and used repeatedly. One of the most prominent contemporary development strategies which has been used frequently to address socio-economic problems within the United States is the human resources development model. Unfortunately, the model has been applied indiscriminately throughout the society with little concern for its appropriateness in specific situations and circumstances. The purpose of this paper is to examine the usefulness of the human resources development approach for understanding unemployment problems within a selected rural area of California. The study findings are discussed in the context of applied development problems for addressing rural unemployment.

THE HUMAN RESOURCES DEVELOPMENT MODEL

The human resources development model is not a new approach in the development field. It's genesis within the United States can be traced at least to the late nineteenth century when universal education was first introduced (Sheppard, 1967). Collective decisions were made at the time to invest large sums of public resources in the education of the masses. Human beings were perceived to be natural resources which could be modified to be more useful in the production of goods and services via education and training. It was reasoned that investments made in human potentials would be

rewarded by increased involvement in work roles by people who would otherwise be excluded from participating in the economic institution of the society.

The returns on the public investments made in human development were very high in the early stages of the industrial revolution as evidenced by the fact that many people trained in the public educational system began to assume useful work roles in the rapidly expanding industrial sector. The early successes of the human resources development model were quickly recognized by the society and subsequently education became highly valued as a means of solving socio-economic problems. It should be observed, however, that the successes of the model during the late 1800's and early 1900's were not entirely a function of education being a panacea to socio-economic problems but rather the result of several necessary, but not sufficient, conditions being met for successful operation of the model.

The single most important factor which contributed to the early successes of the human resources model was the rapidly expanding economic infrastructure which was able to absorb the newly trained people. The industrial sector of the economy was generating many new work roles which had never existed prior to the industrial revolution and new manufacturing techniques were being introduced which antiquated many work skills. During this time of rapid change in work roles and the economy, the educational system continued to meet the demands for trained people (Jakubauskas and Baumel, 1967:X). In fact, training programs were soon extended beyond the formal class-room setting as many workers with obsolete work skills reentered the educational system to make them relevant once again. Thus, education took on broader meaning than formal training in high schools and colleges.

The relationship between the rapidly growing industrial-service sectors of the economy and the educational system proved to be beneficial to all parties involved, assuming one defines socio-economic growth as being desirable. Unemployed people within the society were able to acquire job related training and secure useful status positions in the society. Owners of industry were able to continue expansion programs thus producing larger quantities of consumer goods more efficiently and profitably. During this growth era, the human resources development model complemented and contributed to the expansion of the economic infrastructure of the society.

These early successes of the human resources development approach were instrumental in generating a strong value commitment to the model. This commitment can be identified by examining contemporary development programs used to operationalize national manpower development policies (Jakubauskas and Mitchell, 1967: 15-30; Colmen, 1967; Levitan, et al, 1972) and the strategies used in regional programs to solve employment problems (Hansen, 1970; Spitze, 1970; Jakubauskas and Baumel, 1967; Ikenberry, 1970). Many of these efforts are focused upon developing human potentials via training programs of one type or another.

Thus, the early successes of the model and the value commitments to it have produced societal development policies primarily based on the human resources development approach. The model is applied on a societal basis with little regard for its' relevance to specific situations. Little thought is given to the possibility that the approach may be inappropriate under certain circumstances and even less attention is given to the long-range social consequences of pursuing such a development strategy in areas which do not have an economic base necessary to benefit directly from human

resources development programs. These issues will be addressed in this paper.

The human resources development model is a relatively simplistic model which posits that investments in human beings will benefit the recipients by making them better able to participate in the society (Schultz, 1962; Becker, 1962; McCollum, 1967; Colmen, 1967; Mincer, 1962; Bloch and Smith, 1977; Niland, 1972; Stromsdorfer, 1968; King, 1977; Patten and Clark, 1968; Cohen, 1969). The model basically assumes that unemployment problems are directly related to a lack of role playing skills on the part of the individual experiencing the unemployment. The model asserts that modification of existing role playing skills will result in the individual being absorbed into the economic system. New skills will be gained or outmoded knowledge bases can be updated by education programs and the individual will be reintegrated into the work environment.

The human resources development model will work quite well if the existing economic infrastructure can absorb the newly trained people as evidenced by the introductory statements about the industrial revolution. The model may have very limited utility, however, as a development strategy in areas which have few employment potentials because local people will have to migrate from the local area. Outmigration for employment reasons has severe consequences for contributing areas because the investments made in human resources do not benefit local groups who have invested in human development. In fact, use of limited development resources to train people for jobs that do not exist in the local region would tend to further depress the local situation since the newly trained people will take the investments with them to receiving communities. Thus, investments made in human beings frequently do not benefit rural community groups when newly trained people are forced to leave to find employment.

From a rural, community development perspective, which is nominally defined in this paper as the enhancement of the socio-economic conditions of people living in small towns and open-country areas, it is highly probable that continued pursuit of the human resources approach to societal development will be judged to be counter-productive to the goal of increasing the viability of rural areas. While intuitively the model is appealing, it will probably not prove effective for rural development unless the economic infrastructure is expanded on the local level to absorb trained people. It is the authors' contention that such conditions are seldom met in rural communities with high unemployment rates and that continued reliance upon the human resources development will probably further depress the local region.

RESEARCH TO TEST THE HUMAN RESOURCES MODEL

If the human resources development model is as appropriate to understanding unemployment as the existing literature suggests (Gurin, 1970; Grubb and Lazerson, 1975; Schultz, 1962; Niland, 1972; Patten and Clark, 1968; Ballante, 1972; Koenker, 1967; Spitze, 1970; Blaug, 1976; McCollum, 1967; Stromsdorfer, 1968; Levitan, et al, 1972; King, 1977; Jakubauskas and Baumel, 1967; Bloch and Smith, 1977; Cohen, 1969)[1], then one would expect human resources variables to be significantly related to unemployment status and be useful discriminators of employed and unemployed people. A research was undertaken to ascertain the relationship of selected human resources development factors with length of unemployment of residents within a rural multi-county region in northeast-central California. It was reasoned that people with the least relevant human resources would have

[1]Several of the authors raise serious questions about the human resources development model but it is generally agreed that investments made in human resources have an affect upon employment status.

the highest probability of being unemployed for the longest time. It was further reasoned that if the human resources development model was an effective perspective for understanding unemployment status, then the human resources factors would be useful discriminators of employed-unemployed status.

Sampling

Data were collected from 640 adult residents of a rural multi-county region in northeast-central California during the summer and early fall of 1979. A syscematic random sample was drawn using detailed county maps of the study area to develop the sampling frame. The first occupied residence was selected at random each interviewing day and every tenth occupied dwelling thereafter was selected. The head-of-household or mate was invited to participate in the study by completing a structured questionnaire. If the selected person refused to participate, the interviewers were instructed to solicit participation by the head-of-household or mate of the adjacent occupied dwelling. Once an interview was granted, the original sampling procedure was reinstated.

When a person consented to participate in the study, he or she was presented a questionnaire which was explained in detail by the interviewer. The questionnaire was left in the possession of the respondent to be completed at his/her convenience and retrieved at a designated future date (usually 2 or 3 days later). When the interviewer returned to secure completed questionnaires, the respondents were asked to provide any additional comments about the study questions and any observations were recorded. In the event the respondent could not complete the questionnaire without assistance, such as sight problems or advanced age, the questionnaire was administered orally to the participants. This situation was quite rare during the data collection.

The interviewers were required to mark the site where each completed questionnaire was taken and the distribution was monitored by trained field staff to ensure that clustering of the sample did not occur. The various political entities within the study area were proportionally sampled to ensure representativeness of the sample. The actual number of respondents drawn from each town, village and open-country area were very close to the number expected using the most recent estimates of population.

Participation in the study was completely voluntary and several people elected not to complete a questionnaire. The interviewers were requested to maintain a count of the people who refused to participate and discussions with field staff indicate that approximately 75 percent of those requested to participate actually completed questionnaires.

Measurement of Variables

The human resources development factors included in the study[2] were measured in the following manner:

Age was measured by asking the respondent to provide the age of the primary income earner at last birthdate.

Educational achievement level was measured as the number of years of formal education completed by the primary income earner.

Occupation was measured by asking the respondent to describe the occupation of the primary income earner. These descriptions were used to classify the occupations into the following categories: professional,

[2]Sex of the primary income earner was not included in the statistical analyses even though the existing research suggests it is significantly related to the phenomenon under study. Sex was eliminated from the analysis because the region is primarily composed of family units with male primary income earners. The number of female primary income earners was only 14 percent of the total which prevented consideration of the variable in the analyses.

executive, skilled white-collar, skilled blue-collar, unskilled white-collar, unskilled blue-collar, permanently unemployed. The categories were weighted 1 through 7 with the people classified as professionals receiving scores of 1 while the permanently unemployed received scores of 7.

Health status was measured by providing the respondents a continuum which ranged from 0 to 10 and asking them to circle the number that reflected their perception of the health status of the primary income earner. A value of 0 indicated very poor health while a value of 10 indicated excellent health.

Commuting distance to work was measured in miles one way.

Perception of how closely work skills and work roles were matched was measured by asking the respondents to note whether the primary income earner was: overtrained for job, work skills match job requirements, or undertrained for job. The weighting values for the responses were 1 through 3 with overtrained responses receiving a 1, work skills matching job requirements receiving a 2, and undertrained a value of 3.

Participation in a labor union was measured as a dummy variable with "yes" responses receiving a value of 1 and "no" responses a value of 2.

Participation in special training was assessed by asking the respondent if the primary income earner had taken special training in preparation for his/her work role. "Yes" responses were given a value of 1 and "no" responses a value of 2.

Usefulness of the job training for functioning in the primary income earner's present work role was measured on a continuum of 0 to 10 with 0 indicating not useful while 10 indicated very useful.

The primary income earner's satisfaction with present work role was measured on a continuum from 0 to 10 with 0 indicating very strong

satisfaction, while 10 represented great dissatisfaction with the job.

Length of residence in the county was measured in terms of years the family had lived in the county of present residence.

Family size was operationalized as the number of family members living in the household at the time of the study.

Attitude toward migration was measured by asking the respondents to indicate how their family would feel about having to move for employment reasons. The possible responses were: very happy, happy, neither happy nor sad, sad, and very sad. The responses were weighted 1 through 5 with very happy designated as 1 and very sad as 5.

Income for the preceding year was measured in $1,000 categories which ranged from 0 to over $25,000. The categories were weighted 1 through 26 with 1 indicating less than $999 per year while 26 represented the highest income category.

Length of unemployment was measured by asking the respondents to indicate the number of weeks the primary income earner had been unemployed in the last three years.

Statistical Analyses

Multiple correlation was used to examine the intercorrelations among the variables and to determine what human resources factors were significantly correlated with length of unemployment at the .05 level. Length of unemployment was treated as the dependent variable and regressed against the independent factors to ascertain the explanatory power of the variables when considered simultaneously. Discriminant analysis was used to determine which variables could be used to discriminate between primary income earners who had not experienced unemployment and those who had been unemployed at some time in the preceding three years.

Missing data for the study variables were assigned the variable mean and maintained for further analysis. Relatively little data used in the analyses being reported here were missing which means that restriction of variance in the variables is of no consequence.

FINDINGS

Analysis of Length of Unemployment

Data for the primary income earners who had experienced unemployment during the last three years were disaggregated from the data set and analyzed separately. Retired people were excluded from the analysis.

One hundred thirteen respondents indicated that the primary income earner in the family had been unemployed at some time during the preceding three years which constitutes a 17.6 percent unemployment figure for the time period studied.[3] Of these 113 respondents, nineteen failed to provide data for length of unemployment, subsequently the 19 cases were deleted from the correlation and regression analysis. Thus, the analyses reported in Tables 1 and 2 are calculated from 94 cases.

Correlates of Length of Unemployment

The correlation matrix for the human resources factors examined in the study and length of unemployment[4] during the last three years is presented in Table 1.

(Table 1 Here)

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[3] It must be noted that all of these people were probably not unemployed at the same time but the data suggest that unemployment is a problem within the study region. If data for mates were added, then the figure would have been considerably higher.

[4] The mean length of unemployment for those who had experienced unemployment during the last three years was 24.1 weeks. The standard deviation was 27.3 weeks.

Table 1: Correlation Matrix For Selected Human Resources Development Factors and Length of Unemployment (N=94)

	Length Of Unemployment	Age	Education	Occupation	Health Status	Commuting Distance	Job Skills and Requirements	Labor Union Membership	Special Training	Usefulness of Job Training	Satisfaction with Job	Length of Residence	Family Size	Migration Attitudes	Income
Length of Unemployment	1.00														
Age	0.294*	1.00													
Education	0.041	-0.206*	1.00												
Occupation	-0.040	-0.002	-0.357*	1.00											
Health Status	-0.151	-0.274*	0.165	-0.106	1.00										
Commuting Distance	0.026	0.077	-0.120	0.112	0.077	1.00									
Job Skills and Requirements	0.129	0.171	0.089	0.018	-0.061	0.098	1.00								
Labor Union Membership	0.097	-0.102	0.044	0.033	0.015	-0.146	-0.261*	1.00							
Special Training	0.006	0.077	-0.312*	0.275*	-0.138	0.109	-0.117	0.188	1.00						
Usefulness of Job Training	0.045	-0.094	-0.028	-0.237*	0.059	-0.026	0.223*	0.042	-0.068	1.00					
Satisfaction with Job	-0.086	-0.033	-0.241*	0.199	-0.066	-0.078	-0.241*	0.095	0.086	-0.265*	1.00				
Length of Residence	0.102	0.267	-0.161	0.129	-0.066	0.080	0.065	0.085	0.147	-0.106	0.056	1.00			
Family Size	-0.090	-0.054	0.100	-0.074	-0.120	-0.012	-0.096	-0.048	-0.097	0.027	-0.072	-0.061	1.00		
Migration Attitudes	0.096	0.175	-0.167	0.099	-0.181	-0.002	0.048	0.034	0.052	0.103	-0.011	0.022	-0.059	1.00	
Income	-0.142	0.131	0.166	-0.115	0.137	0.177	0.100	-0.251*	-0.021	-0.085	-0.271*	0.057	0.201	-0.087	1.00

*Significant at the .05 level.

The correlational analysis revealed that age was the only human resources factor significantly related to length of unemployment at the .05 level. As age increased, so did length of unemployment. The magnitude of the correlation, however, was quite low (0.294).

Regression Analysis

Length of unemployment was designated as the dependent variable and regressed against the human resources variables selected for investigation. Age was the only factor shown to be significant at the .05 level in reducing the unexplained variance in length of unemployment. The adjusted coefficient of determination was 0.076 which means the explanatory power was quite low. The best regression model is presented in standardized regression coefficient form:

$$y = 0.294\ X_1 + 0.961e$$

where

y = length of unemployment
X_1 = age of primary income earner
e = residual error

Discussion of the Correlation and Regression Findings

The correlation and regression findings clearly show that the human resources development variables selected for investigation were practically useless as predictors of length of unemployment. With the exception of age, none of the human resources development variables were significantly related at the .05 level with the dependent variable. These findings indicate that the human resources variables selected for study were not impediments to extended periods of unemployment for the study participants.

The California findings reported here are very similar to previous research conducted in Ohio (Napier, Maurer, and Bryant, 1980; 1978) where it was demonstrated that human resources factors were relatively useless

predictors of length of unemployment for primary income earners. The Ohio data revealed that none of the human resources variables employed in the study was significantly related to length of unemployment at the .05 level. Replication of the Ohio findings in California adds credibility to the conclusions drawn by Napier, et al (1980;1978) that primary emphasis placed on human resources model is probably not an appropriate community development strategy for rural areas.

Discriminant Analysis

To investigate in greater depth the relationship of the human resources development factors with unemployment status, discriminant analysis was used to compare the human resources characteristics of primary income earners who had experienced unemployment at some time during the preceding three years with those who had not. All respondents who did not report employment status (missing data) or indicated they were retired were eliminated from the analysis. This approach produced a group of unemployed primary income earners which numbered 113 while the number of cases in the employed group was 276. The descriptive data derived from the discriminant analyses for both study groups are presented in Table 2.

(Table 2 Here)

The data presented in Table 2 show that the employed group of primary income earners tended to: be older, be better educated, be from higher status occupations, exhibit slightly higher perceived health status, travel fewer miles to work, perceive their work roles to be slightly more aligned to job skills, perceive their special job training activities to be slightly less useful, be slightly more satisfied with their jobs, be longer residents of the region, and have larger families than the unemployed primary income earners. The two groups were almost identical in terms of labor union

Table 2: Comparison of Human Resources Characteristics of Unemployed and Employed Primary Income Earners (N=389)

Characteristic	Descriptive Data	
	Unemployed Group (N=113)	Employed Group (N=276)
Age(In Years)	$\bar{x}$ = 37.8 S.D.= 13.0	$\bar{x}$ = 41.5 S.D.= 11.7
Education (In Years)	$\bar{x}$ = 12.9 S.D.= 3.0	$\bar{x}$ = 14.0 S.D.= 2.9
Weighted Occupational Ranking (1-7 Scale)	$\bar{x}$ = 4.5 S.D.= 1.4	$\bar{x}$ = 3.5 S.D.= 1.6
Perceived Health Status (0-10 Scale)	$\bar{x}$ = 8.2 S.D.= 2.2	$\bar{x}$ = 8.4 S.D.= 1.8
Commuting Distance One Way (In Miles)	$\bar{x}$ = 18.8 S.D.= 17.4	$\bar{x}$ = 12.5 S.D.= 13.7
Agreement of Job Skills & Requirements (Range of Scores 1-3)	$\bar{x}$ = 1.7 S.D.= 0.4	$\bar{x}$ = 1.8 S.D.= 0.4
Labor Union Members (Yes=1; No=2)	$\bar{x}$ = 1.7 S.D.= 0.5	$\bar{x}$ = 1.7 S.D.= 0.4
Special Training (Yes=1; No=2)	$\bar{x}$ = 1.3 S.D.= 0.5	$\bar{x}$ = 1.3 S.D.= 0.4
Usefulness of Job Training (0-10 Scale)	$\bar{x}$ = 8.5 S.D.= 2.0	$\bar{x}$ = 8.3 S.D.= 2.1
Satisfaction With Job (0-10 Scale)	$\bar{x}$ = 2.7 S.D.= 2.5	$\bar{x}$ = 2.5 S.D.= 5.9
Length of Residence (In Years)	$\bar{x}$ = 9.3 S.D.= 10.0	$\bar{x}$ = 11.0 S.D.= 11.3
Family Size (People)	$\bar{x}$ = 2.8 S.D.= 1.3	$\bar{x}$ = 3.2 S.D.= 2.4
Attitude Toward Moving For Employment (1-5 Scale)	$\bar{x}$ = 4.0 S.D.= 1.2	$\bar{x}$ = 4.0 S.D.= 1.1

membership, participation in special training programs, and attitudes toward moving for employment reasons.

The human resources characteristics selected for investigation in the study were employed as potential discriminators of unemployment status using the Wilk's lambda step-wise approach to discriminant analysis (Nie, et al, 1975: 446-448). The discriminant analyses findings are presented in Table 3.

(Table 3 Here)

The discriminant analyses findings demonstrate that nine of the thirteen human resources factors used in the study were significant in discriminating the two groups but the discriminating power of the variables was relatively low given the number of variables used in the analysis. The square of the canonical correlation is an approximation of the eta square in analysis of variance which means that a canonical correlation of 0.429 must be interpreted as a low to moderate association.

The nine human resources variables shown to be significant in the analysis in order of their relative importance to the discriminant analyses function are: occupational status, agreement of job skills and work requirements, commuting distance, usefulness of job training, perceived health status, age, family size, labor union membership, and length of residence.

Discussion of Discriminant Analyses Findings

The discriminant analyses findings add further evidence to the regression findings that the human resources factors selected to represent the human resources development model are not adequate for understanding unemployment status among residents of the rural region under study. Even though the expected patterns of the human resources variables for the unemployed and employed groups were basically realized in the research, the ability to

Table 3: Discriminant Analysis for Unemployed-Employed Primary Income Earners Using Human Resources Characteristics (Unemployed Group--N=113; Employed Group--N=276)

Discriminators in Order of Importance to the Analysis	Standardized Discriminant Function Coefficients	Eigenvalue	Canonical Correlation	Wilks' Lambda	Chi-Square	Degrees of Freedom	Significance Level
Occupational Status	0.655	0.225	0.429	0.816	77.8	9	0.000
Job Skills Agree With Job Requirements	-0.448						
Commuting Distance	0.389						
Usefulness of Job Training	0.33						
Perceived Health Status	-0.306						
Age	-0.293						
Family Size	-0.291						
Labor Union Membership	-0.260						
Length of Residence	-0.167						

Group Centroids

Unemployed 0.740
Employed -0.303

Percent of "Grouped" Cases Correctly Classified: 76.1%

predict employment status and to discriminate the two groups using the factors chosen for investigation was not very successful. Similar findings were reported by Napier, et al, (1978; 1980) using data collected in southeast Ohio. While the number of human resources development variables used in the Ohio study were considerably fewer than those used in the California study, they were shown to be of little utility in the explanation of length of unemployment and in discriminating employed and unemployed primary income earners. Napier, et al, (1978; 1980) offers an alternative explanation to unemployment within rural areas which also appears to have application in the California study area.

A STRUCTURAL EXPLANATION OF UNEMPLOYMENT

Research conducted by Napier, et al, (1978; 1980) in rural Ohio combined with the California study findings reported in this paper suggest that primary reliance upon human resources characteristics to understand unemployment will probably prove much less fruitful than examination of structural conditions within the region of residence of the unemployed. The effectiveness of the human resources development model is predicted upon the existence of useful work roles within local communities. If work roles requiring sophisticated work skills do not exist within local rural communities, then diversity in human resources development factors will be of little utility in explaining unemployment status. If the work roles which do exist require low-level skills to adequately perform them, then individuals who acquire extensive educational experiences will have little comparative advantage over other people when competing for the existing work roles. Thus, people with extensive work skills may remain unemployed for extended periods of time because they are no better able to perform the existing work roles than people with fewer job skills. This sequence of logic suggests that local

employment structures are probably better predictive factors than human resources characteristics. If this should be shown to be true by empirical investigation, then the implications for rural development policy are tremendous.

Policy Implications of Structural Explanations

If the structural explanation of unemployment is demonstrated to be valid, then rural development policies oriented toward amelioration of unemployment will have to be modified extensively. More emphasis will have to be placed upon economic infrastructure development (Napier and Bryant, 1980; Napier, et al, 1980) to provide the work roles for people to perform in the local area once they have received the education or job training associated with the human resources model. This approach suggests some reordering of development priorities from training people for jobs that do not exist in the local area to job creation and then placing emphasis upon job training. The position taken in this paper should not be interpreted as advocating a "make-work" approach to rural development such as on-the-job training or CETA type programs. Quite frequently "make-work" programs do not result in long-term job creation since jobs are often terminated when the funding ceases.

A structural alternative that appears to have considerable merit is federal and state subsidy of small private businesses in local areas. Birch (1979) demonstrated that community groups frequently benefit more from small businesses because such economic enterprises are more permanent and require fewer subsidies from local groups. Therefore, one possibility would be massive public investment in the development of small businesses in the industrial-service sectors of rural areas. Human resources development could be pursued simultaneously to achieve a well trained work force. In this way, trained people could remain in the local area and the economic infrastructure

of rural areas would become viable once again.

While the suggested approach is only one of many mechanisms for attacking the structural blockages to rural development, it should suffice to demonstrate basic differences in the structural and human resources development approach. It is the author's contention that too much emphasis has been placed upon the human resources development approach and very little upon the structural model. The research findings generated in California and the other studies conducted in Ohio strongly suggest the need for reexamination of rural development policies to solve rural unemployment problems.

SUMMARY AND CONCLUSIONS

Data were collected from a systematic random sample of rural residents in a multi-county area of northeast-central California to ascertain the extent of unemployment in the study region and the covariants of the length of unemployment. The findings demonstrated that human resources development factors were very poor predictors of length of unemployment and of relatively little utility in explaining unemployment status which was operationalized as unemployed-employed.

It was concluded that human resources characteristics were grossly inadequate as predictors of unemployment status and that structural explanations have considerable promise as development strategies. The findings suggest that continued reliance upon human resources development approaches for solving rural unemployment will probably not be very successful and perhaps even counter-productive in the context of general rural development objectives.

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